

Date: Thursday, 23/10/2008 10:54:00 AM
 User: Julie Dawson

Process Sheet

Customer :	CU-DAR001 Dart Helicopters Services	Drawing Name :	LITTER TIE DOWN ASS'Y (LOCKING) - UNDER REVIEW
Job Number :	42883	Part Number :	D2360
Estimate Number :	10495	Drawing Number :	D2360/D2341
P.O. Number :		Project Number :	N/A
This Issue :	23/10/2008	Drawing Revision :	D / F
Prsht Rev. :	NC	Material :	
First Issue :	//	Due Date :	15/11/2008
Previous Run :	41338	Qty:	6 Um: Each
Written By :			
Checked & Approved By :	JLD 08.10.23		
Comment :	est rev H 07.06.12 ecn 825 EC		

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	D6201	"T" Extrusion
-----	-------	---------------



Comment: Qty.: 1.1067 f(s)/Unit Total : ~~6.6402 f(s)~~ 5.5335

Material: D6201 (6061-T6 (QQ-A-200/8) 4" x 4" x 3/8" Thick 'T' extrusion)

Batch: 36793

N.A 08/10/25

2.0	BAND SAW	BAND SAW
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Comment: BAND SAW

Cut blanks: 12.65" Long

N.A 08/10/25

3.0	HAAS1	HAAS CNC VERTICAL MACHINING #1
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Comment: HAAS CNC VERTICAL MACHINING #1

Machine as per Folio D2341 and Dwg D2341

2-Deburr

N.A 08/10/25

4.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
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Comment: INSPECT PARTS AS THEY COME OFF MACHINE

N.A 08/10/25

5.0	QC8	SECOND CHECK
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Comment: SECOND CHECK

N.A 08/10/27

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2360 PAR #: N/A Fault Category: Prod. Mach. NCR: Yes No DQA: 11 Date: 08.11.03
(D350-616-011-013) Scrap / Scrap. QA: N/C Closed: 10 Date: 08/11/20

NCR: <u>42883</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
8/10/27	#30	During machining the counters a piece of the cast out got caught in between Distance 0.750" and 3.313 3.313." (see Dwg.)	CP 08.10.27 DSI 042	SCRAP and Destroy. no people an extra was made	H.A 08/10/27	08/10/27	CP 08.10.27 DSI 042	S 08/10/27
		D2341 for highlight area) Re: causing the part to bend and machine smaller. R.C. chips. Dicht clean out.	DSI 042	Fix Saw to prevent from happen again	08.10.27	08/10/27	DSI 042	S 08/10/27
		during machining		See last page for clarification	08.11.18.			S 08/10/27

NOTE: Date & initial all entries

Date: Thursday, 23/10/2008 10:54:01 AM
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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: LITTER TIE DOWN ASSY (LOCKING) - UNDER REVIEW

Job Number: 42883

Part Number: D2360

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



(5X)

Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

M.L

08/10/27

7.0

POWDER COATING

POWDER COATING



M109152

Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

(5)

START TIME:

7:45

OVEN TEMPERATURE:

320°

FINISH TIME:

8:15

FL

08/10/28

8.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



9A

Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

08-10-28

RS

9.0

D2002015

Knob



Comment: Qty.: 2.0000 Each(s)/Unit Total : 12.0000 Each(s)

Knob

16177

CU

10.0

D2345

Lock Channel



Comment: Qty.: 1.0000 Each(s)/Unit Total : 6.0000 Each(s)

Lock Channel

16177

39474

CU

11.0

D2366

Lock Handle



Comment: Qty.: 2.0000 Each(s)/Unit Total : 12.0000 Each(s)

Inventory

37431

CU

12.0

D2367

Handle Knob



Comment: Qty.: 1.0000 Each(s)/Unit Total : 6.0000 Each(s)

Inventory

33794

CU 8/10/28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

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Job Number: 42883

Part Number: D2360

Job Number:



Seq. #:	Machine Or Operation:	Description :
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13.0	D2372	Quick Release
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Comment: Qty.: 2.0000 Each(s)/Unit Total : 12.0000 Each(s)
Quick Release 41426

CU

14.0	D2373	Spring
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 6.0000 Each(s)
Spring 41427

CU

15.0	D2444	Pip Pin Assembly
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 6.0000 Each(s)
Pip Pin Assembly 41429

CU

16.0	AN526C1032R18	Screw
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 6.0000 Each(s)
Screw 101458

CU

17.0	AN960JD10	Washer
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Comment: Qty.: 2.0000 Each(s)/Unit Total : 12.0000 Each(s)
Washer 109059

CU

18.0	AN960JD10L	Washer
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Comment: Qty.: 8.0000 Each(s)/Unit Total : 48.0000 Each(s)
Washer 1105793

CU

19.0	MS20470AD34	Rivet,Universal Head
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 6.0000 Each(s)
Rivet,Universal Head 15541

CU

20.0	MS21042L3	Nut
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Comment: Qty.: 3.0000 Each(s)/Unit Total : 18.0000 Each(s)
Nut 1109031

CU 4/28 (5)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 23/10/2008 10:54:01 AM
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Job Number: 42883

Part Number: D2360

Job Number:



Seq. #:	Machine Or Operation:	Description :
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21.0	MS27039113	Screw
------	------------	-------



Comment: Qty.: 1.0000 Each(s)/Unit Total: 6.0000 Each(s)
Screw M105211

22.0	MS27039115	Screw
------	------------	-------



Comment: Qty.: 2.0000 Each(s)/Unit Total: 12.0000 Each(s)
Screw M108169

23.0	NAS679A3W	Nut
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Comment: Qty.: 1.0000 Each(s)/Unit Total: 6.0000 Each(s)
Nut 1463

24.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1
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Comment: SMALL & MEDIUM FAB RESOURCE 1
Assemble as per dwg D2360

25.0	QC5	INSPECT WORK TO CURRENT STEP
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Comment: INSPECT WORK TO CURRENT STEP

26.0	PACKAGING 1	PACKAGING RESOURCE #1
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Comment: PACKAGING RESOURCE #1
Identify and Stock
Location: ST185

27.0	QC21	FINAL INSPECTION/W/O RELEASE
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Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



W 08.11.03

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: 42883
Description: Litter Tie Down Bracket (Locking)		Part Number: D2341
Inspection Dwg: D2341	Rev: F	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.500	+/-0.010	1.503	✓			
1.000	+/-0.010	1.005	✓			
Ø0.242	+0.005/-0.001	Ø0.244	✓			
Ø0.191	+0.005/-0.001	Ø0.193	✓			
R0.250	+/-0.010	R0.250	✓			
1.700	+/-0.010	1.697	✓			
0.750	+/-0.010	0.754	✓			
2.750	+/-0.010	2.754	✓			
11.000	+/-0.005	11.001	✓			
5.500	+/-0.010	5.499	✓			
1.584	+/-0.010	1.588	✓			
Ø0.191	+0.005/-0.001	Ø0.191	✓			
2.610	+/-0.010	2.614	✓			
0.844	+/-0.010	0.844	✓			
1.250	+/-0.010	1.252	✓			
0.750	+/-0.010	0.749	✓			
12.500	+/-0.010	12.50	✓			
3.313	+/-0.010	3.316	✓			
4.250	+/-0.010	4.247	✓			
0.400	+/-0.010	0.3985	✓			

Measured by: G.A	Audited by: Jmf	Prototype Approval:	N/A
Date: 08/10/25	Date: 08/10/27	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	06.05.24	New Issue P/O D2360	KJ/JLM	
B	07.07.17	Dwg Rev. updated	KJ/JLM	BE

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

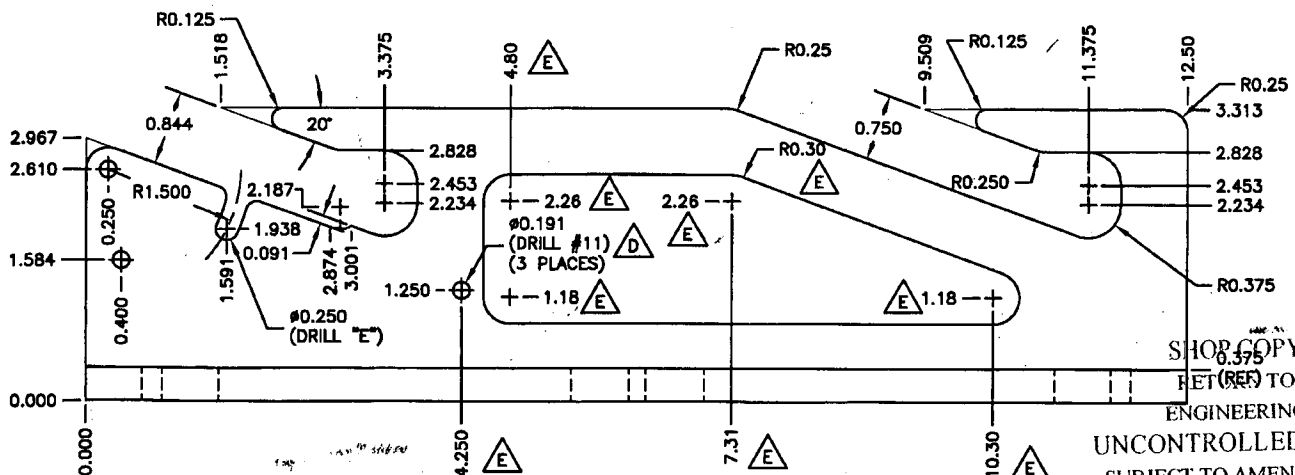
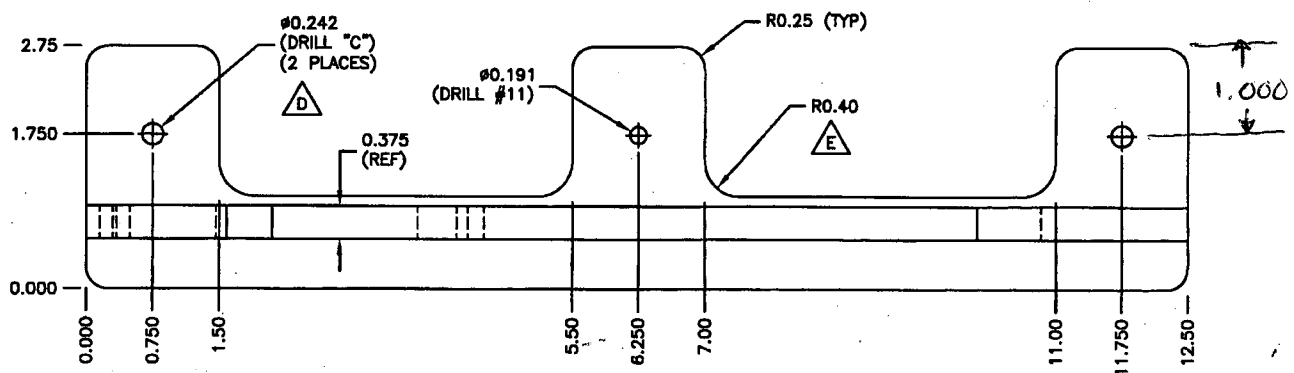
QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

DESIGN BW	DRAWN BY JC	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D2341	REV. F SHEET 1 OF 1
DATE 07.06.07		TITLE LITTER TIE DOWN BRACKET (LOCKING)	
		SCALE 1:2	
A	95.01.13	NEW ISSUE	
B	95.02.14	MODIFIED LOCK	
D	95.02.20	CHANGES TO DIAMETERS	
E	97.10.01	CHANGES FOR MACHINING	
F	07.06.07	REVISED NOTES; FINISH WAS ANODIZE	

**D2341 LITTER TIE DOWN BRACKET (LOCKING)**

- 1) MATERIAL: MAKE FROM D6201-0125 EXTRUSION (6061-T6/T651 PER QQ-A-200/B)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 POWDER COAT WHITE (REF. 4.3.5.1) PER QSI 005 4.3
- 3) BREAK ALL SHARP EDGES TO 0.005 TO 0.010
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 6) IDENTIFY WITH DART P/N "D2341" USING FINE POINT PERMANENT INK MARKER

SHOP COPY
RET (REF) TO
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UNCONTROLLED COPY
SUBJECT TO AMENDMENT

WITHOUT NOTICE
WORK ORDER

NO. 42883

RELEASED

07-6-22

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN BW	DRAWN BY CB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED CE	APPROVED [Signature]	DRAWING NO. D2360	REV. D SHEET 1 OF 2
DATE 07.06.06		TITLE LITTER TIE DOWN ASSEMBLY (LOCKING) NTS	
A	95.02.10	NEW ISSUE	
B	95.02.20	RE-DESIGN	
C	97.08.27	ADD MS20470AD3-4 RIVET	
D	07.06.06	D2002-015 WAS D2376; SECTION B-B QTY(2) AN960JD10 WAS QTY(3) QTY(8) AN960JD10L WAS QTY(5)	

RELEASED

97.06.07 **[Signature]**

PARTS LIST:

QTY	PART NUMBER	DESCRIPTION
X	D2360	LITTER TIE DOWN ASSEMBLY (LOCKING)
1	D2341	LITTER TIE DOWN (LOCKING)
1	D2345	LOCK CHANNEL
2	D2366	LOCK HANDLE
1	D2367	KNOB (DELRIN)
2	D2372	QUICK RELEASE FASTENERS
1	D2373	SPRING
2	D2002-015	KNOB (DELRIN)
1	D2444	PIP PIN
1	AN526C1032R18	SCREW
2	AN960JD10	WASHER
8	AN960JD10L	WASHER
1	MS20470AD3-4	RIVET
3	MS21042L3	NUT (OR MS21042-3)
1	MS27039-1-13	SCREW
2	MS27039-1-15	SCREW
1	NAS679A3W	NUT

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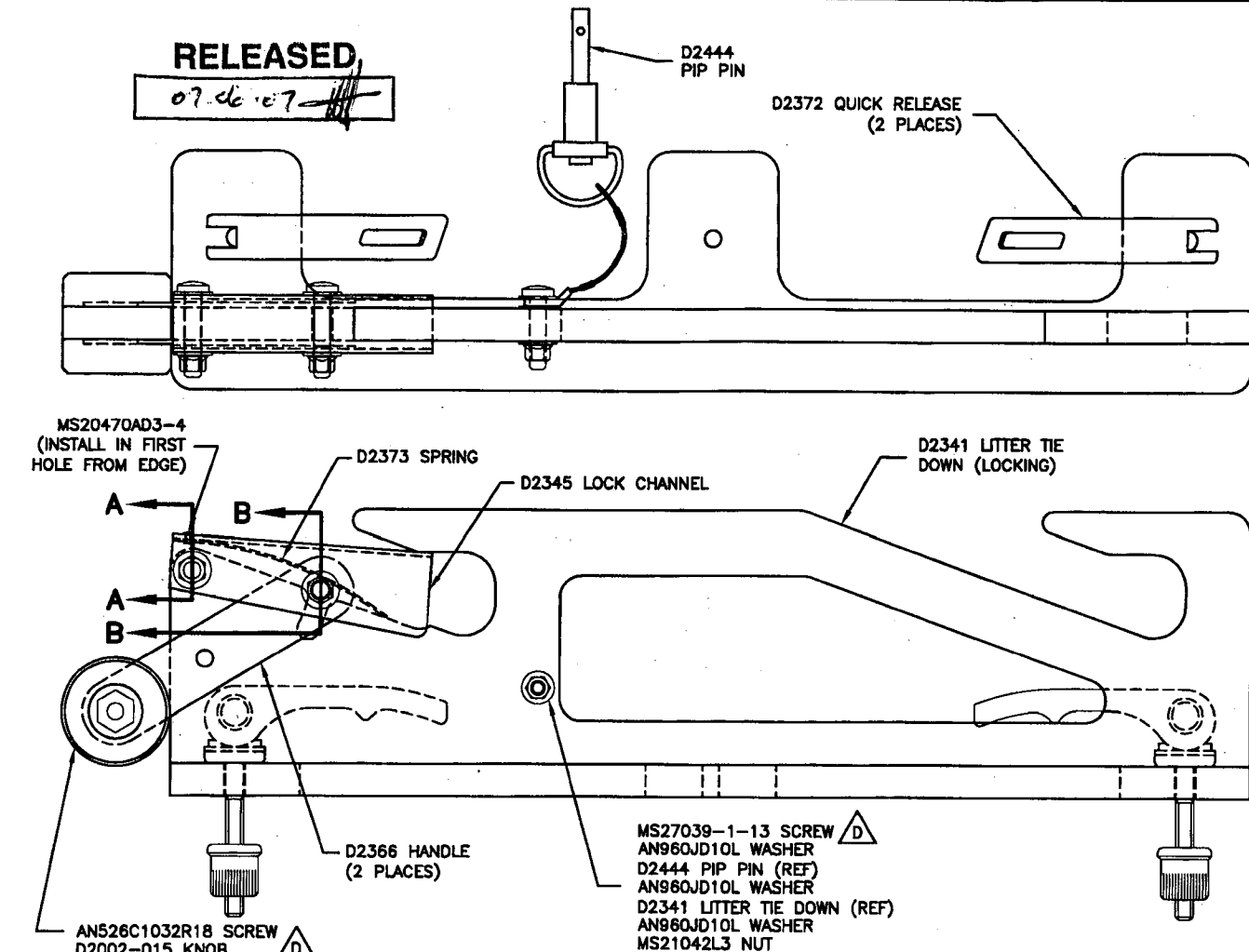
QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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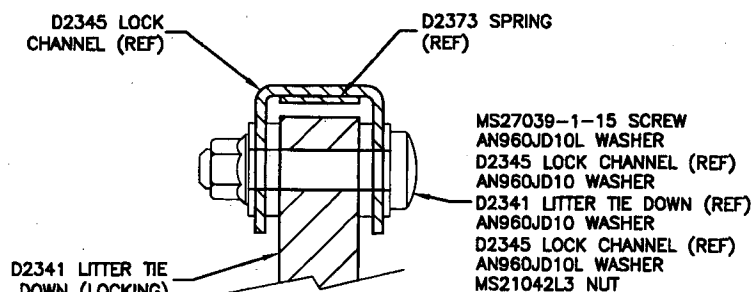
NOTE: Date & initial all entries

DART

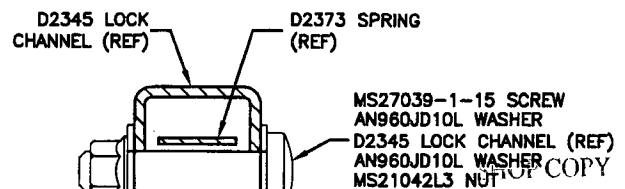
DESIGN BW	DRAWN BY CB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED CE	APPROVED #	DRAWING NO. D2360	REV. D SHEET 2 OF 2
DATE 07.06.06		TITLE LITTER TIE DOWN ASSEMBLY (LOCKING) NTS	SCALE



D2360 LITTER TIE DOWN ASSEMBLY (LOCKING)



SECTION A-A
(SCALE 1:1)



SECTION B-B
(SCALE 1:1)

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WORK ORDER
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No *See Back of First Page* DQA: _____ Date: *11/18*

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
08-10-27	3.0	While machining the contour, a piece of the material, was caught between the part, and the tool at the 0.750" ± 3.313" location, causing the part to bend, and be machined smaller along the top.	<i>[Signature]</i>	Part was scrapped & no replace. A section of the Jaws was machined out, to allow the chips to remove during machining, and not buildup.	<i>[Signature]</i>	08-11-18	<i>[Signature]</i>	<i>[Signature]</i>
		R.C: Chips were building up during machining, inside the jaws on the vise. * Process *	<i>[Signature]</i>		<i>[Signature]</i>	08-11-18	<i>[Signature]</i>	<i>[Signature]</i>

NOTE: Date & initial all entries